



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of
Ryuji Shiozaki et al.

Serial No.: 10/500,819

Group Art Unit: 1745

Filed: July 7, 2004

Examiner: Chuo, Tony Sheng Hsiang

For: POSITIVE ACTIVE MATERIALS AND NON-AQUEOUS ELECTROLYTE
BATTERIES EMPLOYING THE SAME

Honorable Commissioner of Patents
Alexandria, VA 22313-1450

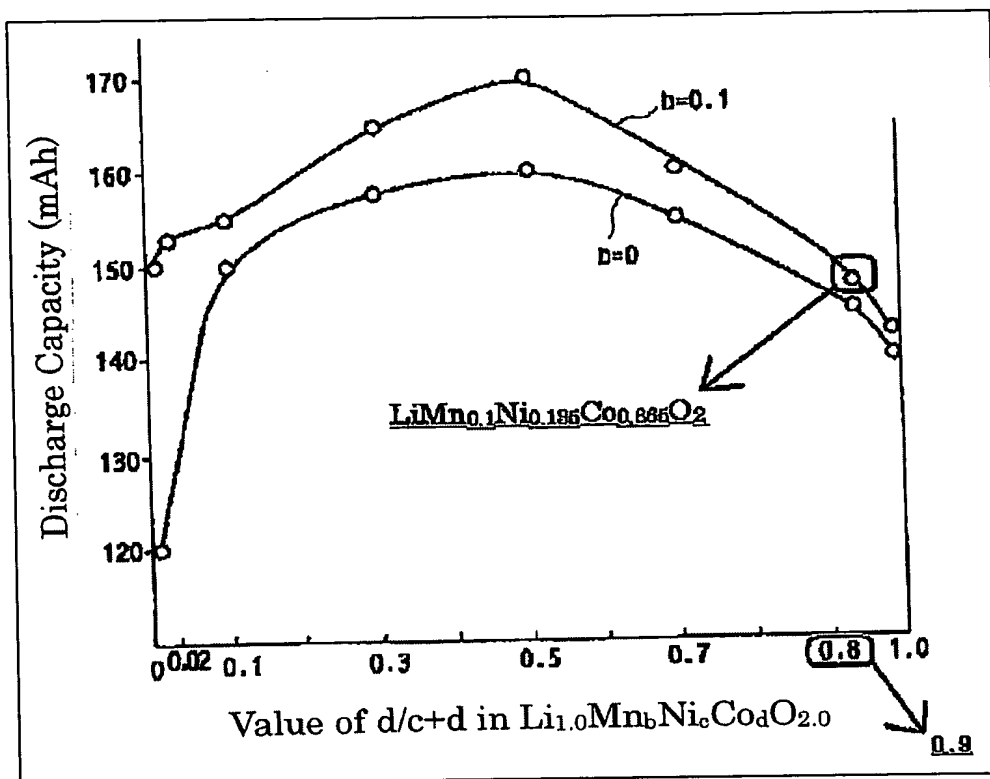
DECLARATION UNDER 37 CFR 1.132

Sir:

Comes now the inventor Daisuke ENDO (hereinafter referred to as the "Declarant"),
and for his Declaration under 37 CFR 1.132, states and avers as follows:

1. That I graduated from Osaka City University, Graduate School of Engineering, Faculty of Engineering, Course of Applied Chemistry in March of 2002. I have been employed by YUASA CORPORATION since April of 2002. From 2002 to present, I have been engaged in research and development regarding active materials for lithium-ion batteries.

2. That I have read and am familiar with Noma et al. (Japanese Published Application JP 05-242891) (hereinafter, "Noma") which the Examiner has cited as prior art against the present Application. In particular, I have studied Figure 2 of Noma which is provided below. Incidentally, it is clear that the numerical value for a scale on the abscissa axis in Fig. 2 is "0.9", not "0.8", taking the scale on the abscissa axis into consideration.



Noma's Figure 2

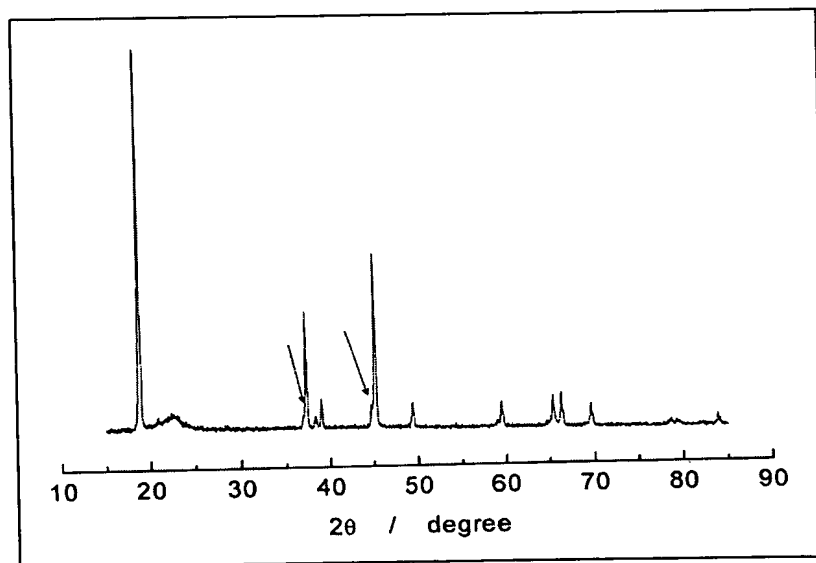
3. That in Fig. 2 of Noma, it can be said that compositions identified by a mark (—○—) are descriptions corresponding to an Example or Comparative Example in Noma. Among the compositions disclosed by Noma (e.g., identified in Figure 2), only the composition of $\text{LiMn}_{0.1}\text{Ni}_{0.063}\text{Co}_{0.837}\text{O}_2$ (i.e., the composition identified by the mark at the position corresponding to " $b=0.1$, $d/c+d=0.93$ ") may be alleged as possibly overlapping with the scope of Claim 7 or 9 of the claimed invention.

4. That I have conducted experimentation to determine whether the composition $\text{LiMn}_{0.1}\text{Ni}_{0.063}\text{Co}_{0.837}\text{O}_2$ as disclosed in Noma includes "a single-phase structure belonging to space group $R\bar{3}m$ ", as recited in claims 7 and 9 of the present Application.

5. That in my experimentation, in order to duplicate $\text{LiMn}_{0.1}\text{Ni}_{0.063}\text{Co}_{0.837}\text{O}_2$ as described in Noma, the same synthesizing procedure and the same synthesizing condition as in Noma were applied. In particular, in my experimentation I followed the description set forth in paragraphs [0010] - [0015] and Figures 1-3 in Noma.

That is, under the same conditions as described in paragraphs [0010] - [0015], in my experimentation, Li_2CO_3 (lithium carbonate), MnCO_3 (manganese carbonate), NiCO_3 (nickel carbonate), and CoCO_3 (cobalt carbonate) were mixed in a mortar so that the mole ratio of Li, Mn, Ni and Co were set to 1:0.1:0.063:0.837, and then the mixture was heat-treated at 850°C in the air for 20 hours to produce the positive active material which includes $\text{LiMn}_{0.1}\text{Ni}_{0.063}\text{Co}_{0.837}\text{O}_2$.

That I studied the composition $\text{LiMn}_{0.1}\text{Ni}_{0.063}\text{Co}_{0.837}\text{O}_2$ which I produced in my experimentation by using X-ray diffractometry with standard X-ray diffractometry equipment. The result of X-ray diffractometry that I performed is shown in Declarant's Figure 1 provided below.



Declarant's Figure 1

As is clear from Declarant's Figure 1, the X-ray diffractometry spectrum of the



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**SUBMISSION OF VERIFIED ENGLISH TRANSLATION
OF THE PRIORITY DOCUMENT**

Sir:

Submitted herewith is a copy of the verified English translation of the Specification, Claims and Abstract, and the Declaration of Katsuhisa Kizaki, dated August 27, 2008, that the English translation is a true English translation of the Japanese Application Number 2002-088229 filed March 27, 2002, upon which application the claim for priority is based.

Approval and acknowledgment of receipt are respectfully requested.

Respectfully submitted,

A handwritten signature in black ink, appearing to be "P. E. Miller".

Phillip E. Miller, Esq.
Registration No. 46,060

Date: 9/25/08

McGinn Intellectual Property Law, PLLC
8321 Old Courthouse Road, Suite 200
Vienna, VA 22182-3817
(703) 761-4100
Customer No. 21254

Serial No. 10/500,819
Docket No. Y31-170800C/KK

4

$\text{LiMn}_{0.1}\text{Ni}_{0.063}\text{Co}_{0.837}\text{O}_2$ exhibited two peaks (as indicated by arrows in Declarant's Figure 1) attributable to space group C2/m which were observed at positions of 37.0° and 44.8° , in addition to one peak attributable to R3-m. (However, the broad peak in the vicinity of 23° is derived from an adhesive tape used for fixing a sample during measurement.)

7. That based on the results of my experimentation as illustrated in Declarant's Figure 1, I have concluded that the composition $\text{LiMn}_{0.1}\text{Ni}_{0.063}\text{Co}_{0.837}\text{O}_2$ as described in Noma was clearly not a single-phase. Accordingly, the composition $\text{LiMn}_{0.1}\text{Ni}_{0.063}\text{Co}_{0.837}\text{O}_2$ as disclosed in Noma clearly does not include "*a single-phase structure belonging to space group R3-m*", as recited in claims 7 and 9 of the present Application.

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application for any patent issued thereon.

Further Declarant sayeth naught.

Sept. 16, 2008
Date

Daisuke Endo
Daisuke ENDO, Declarant

Prepared by:



Phillip E. Miller, Esq., Registration No. 46,060
**MCGINN INTELLECTUAL PROPERTY
LAW GROUP, PLLC**
8321 Old Courthouse Road, Suite 200
Vienna, Virginia 22182-3817
(703) 761-4100
Customer No. 21254

Fig. 1

